National Institute of Environmental Health Sciences

El Niño and variations in the prevalence of Plasmodium vivax and P. falciparum in Vanuatu

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Abstract:

Malaria, both Plasmodium falciparum and P. vivax, is a major cause of morbidity in Vanuatu. As P. vivax is more prevalent in seasonal climates and P. falciparum in areas of more consistent rainfall, it is postulated that there will be a correlation between the ratio of vivax:falciparum and the El Niño Southern Oscillation (ENSO), which affects sea surface temperatures and rainfall. With changes in global climate, the frequency, duration and strength of the ENSO are expected to alter, influencing the pattern of malaria. The data showed no obvious correlation between ENSO and either cases of malaria or the vivax:falciparum ratio.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

El Nino Southern Oscillation, Meteorological Factors, Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Tropical

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content